COMSPHERE 3800 SERIES MODEMS MODELS 3810, 3811, AND 3820

JAPAN SUPPLEMENT

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PARADYNE™

COMSPHERE
3800 Series Modems
Models 3810, 3811, and 3820

User's Guide
Japan Supplement
3810-A2-GB93-30
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Introduction 1

Overview

This supplement highlights all safety warnings, installation procedures, features, and functions that are unique to COMSPHERE 3800 Series modems installed in Japan. This document is intended to be used in conjunction with the *COMSPHERE 3800 Series Modems, Models 3810, 3811, and 3820, User's Guide*, Document No. 3810-A2-GB30. Please consult the User's Guide for overall operation of the 3800 Series modem.

This document consists of three chapters. Chapter 1 contains safety warnings, technical specifications, and an equipment list. Chapter 2 provides installation procedures for Model 3810, 3811, and 3820 modems installed in Japan. Chapter 3 lists configurations options that differ from what is described in the *COMSPHERE 3800 Series Modems, Models 3810, 3811, and 3820, User's Guide*.

Safety Warnings

The following warning applies to 3800 Series modems installed in Japan.

この装置は，第一種情報装置（商工業地域において使用されるべき情報装置）で商工業地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）基準に適合しております。

従って，住宅地域またはその隣接した地域で使用すると，ラジオ，テレビジョン受信機等に受信障害を与えることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

THIS EQUIPMENT IS IN THE 1ST CLASS CATEGORY (INFORMATION EQUIPMENT TO BE USED IN COMMERCIAL AND/OR INDUSTRIAL AREAS) AND CONFORMS TO THE STANDARDS SET BY THE VOLUNTARY CONTROL COUNCIL FOR INTERFERENCE BY DATA PROCESSING EQUIPMENT AND ELECTRONIC OFFICE MACHINES AIMED AT PREVENTING RADIO INTERFERENCE IN COMMERCIAL AND/OR INDUSTRIAL AREAS.

CONSEQUENTLY, WHEN USED IN A RESIDENTIAL AREA OR IN AN ADJACENT AREA THERETO, RADIO INTERFERENCE MAY BE CAUSED TO RADIOS AND TV RECEIVERS, ETC.

READ THE INSTRUCTIONS FOR CORRECT HANDLING.

Technical Specifications

Table 1-1 shows technical specifications that are unique to 3800 Series modems installed in Japan.

Table 1-1
Technical Specifications for Japan

Specification	Description
AC POWER REQUIREMENTS	100 Vac ± 10%, 50/60 Hz
DIAL AND LEASED TRANSMIT LEVEL	Adjustable transmit level from –1 dBm to –15 dBm (Dial) and 0 dBm to –15 dBm (Leased)
TELEPHONE INTERFACE	
Dial-Line Connectivity	RJ11C (Model 3810 and Model 3820) RJ21X 50-pin connector (Model 3811) RJ11C Service Line (Model 3811)
Leased-Line Connectivity	JM8 (Model 3810 requires 8-position to 6-position crossover cable) 6-pin center pair leased jack (Model 3820) 50-pin mass termination (Model 3811)

Equipment List

Table 1-2 shows a list of modems and telephone cords available for use in Japan.

Table 1-2
Equipment List for Japan

Equipment	Model/ Part Number
Model 3810 (90–110V) 4-wire/2-wire standalone	3810-A1-603
Model 3811 4-wire/2-wire carrier card	3811-B1-003
Model 3820 (90–110V) 2-wire standalone	3820-A1-603
6-position, 4-wire modular cord, 7-foot length	125-0067-0031
8-position to 6-position crossover modular cord	125-0054-1531

Installation 2

Overview

This chapter provides installation procedures for the Model 3810, 3820, and 3811 modems installed in Japan.

3800 Series Modem Package

After opening the modem's package, check for damage and verify that the following items are present:

For the standalone models

- Manual and Quick Reference
- Model 3810 or Model 3820 modem
- Power transformer
- One 6-position, 4-wire modular cord (Model 3810 and Model 3820)
- One 8-position to 6-position crossover modular cord (Model 3810 only)

For the carrier-mounted model

- Manual and Quick Reference
- Model 3811 modem
- Rear connector plate with two DB-25-P edge card connectors

If any hardware components are damaged, notify your sales representative.

Model 3810 or Model 3820 Modem Installation

The following procedures describe how to connect the standalone modem to the dial line, leased line, and ac power transformer.

Before installing your modem, make sure your installation site is clean and well-ventilated. Allow space around the modem for installing cables and telephone cords, and make sure the modem is located within reach of the ac power outlet. The distance between your modem and DTE should be minimized if DTE data rates exceed 19,200 bps. Also, low capacitance cables may be necessary for speeds greater than 19,200 bps or distances greater than 50 feet.

Figure 2-1 and Figure 2-2 show how Model 3810 and Model 3820 modems are connected to certain TELCO jack types using the supplied cables.

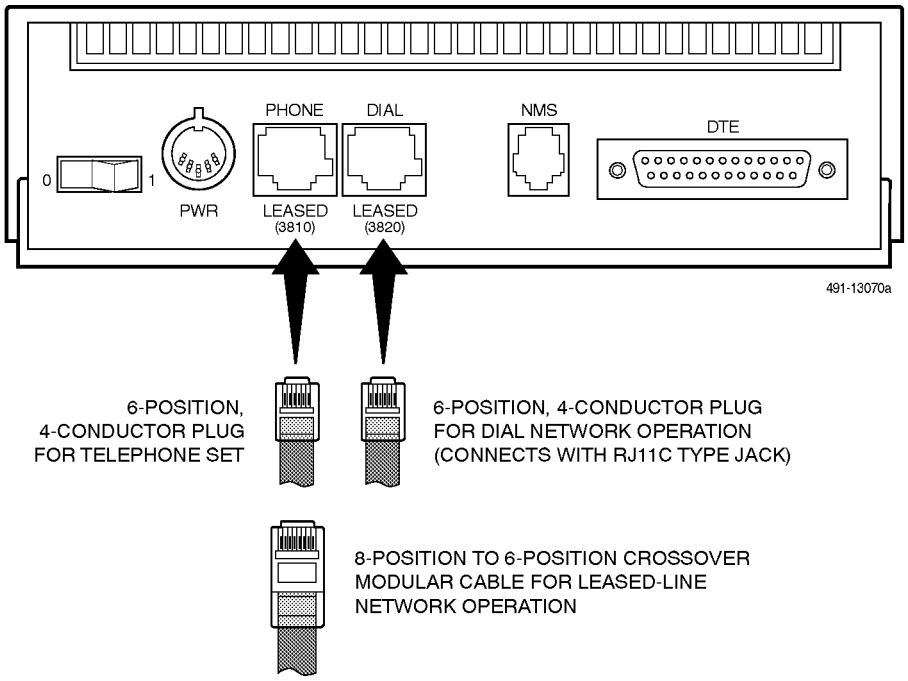

Figure 2-1. Model 3810 Rear Panel

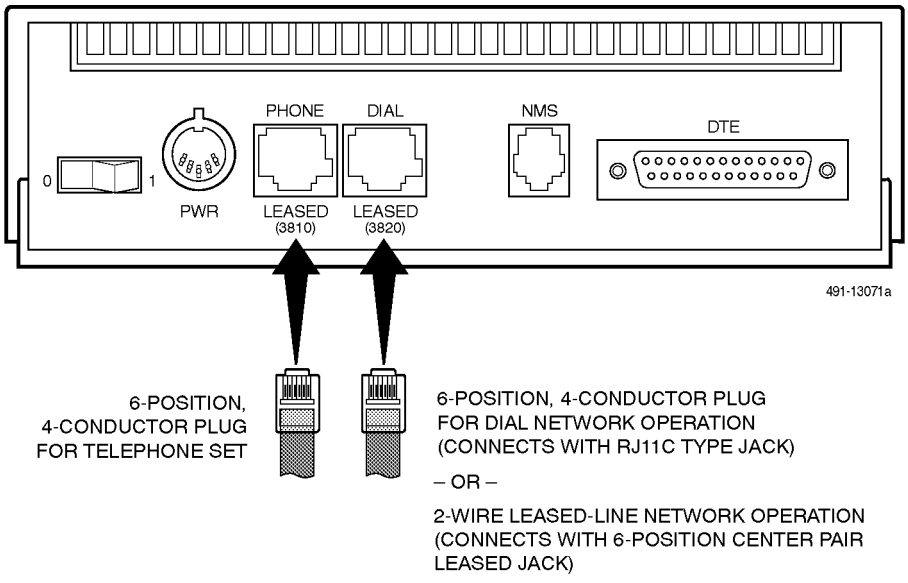

Figure 2-2. Model 3820 Rear Panel

Model 3810 and Model 3820 Dial-Line Connection

Use the following procedure to connect the modem to the dial network interface:

1. Insert the 6-position, 4-conductor modular plug into the jack labeled DIAL/LEASED (3820). See Figure 2-1.

2. Insert the other end of the modular cord into the dial network interface.

Model 3810 4-Wire/2-Wire Leased-Line Connection

Use the following procedure to connect a Model 3810 to the leased-line network interface:

1. Insert the 8-position modular plug into the jack labeled PHONE/LEASED (3810). See Figure 2-1.

2. Insert the 6-position modular plug into the leased-line network interface.

3. If the Model 3810 has a dial backup line, follow the steps listed in the *Model 3810 and Model 3820 Dial-Line Connection* section.

Model 3820 2-Wire Leased-Line Connection

Use the following procedure to connect a Model 3820 modem to the 6-pin, center pair, leased-line network interface:

1. Insert the 6-position, 4-conductor modular plug into the jack labeled DIAL/LEASED (3820). See Figure 2-2.

2. Insert the other end of the modular cord into the leased-line network interface.

Model 3810 and Model 3820 DTE Connection

Use the following procedure to connect the modem to a DTE:

1. Make sure the modem's rear panel power switch is Off.

2. Connect the DB-25 plug on the cable to the DB-25 socket labeled DTE on the modem's rear panel. Use a small screwdriver to fasten the cable to the modem.

3. Connect the other end of the cable to the DTE.

To ensure compliance with FCC Part 15 Regulations, a ferrite choke must be installed on the EIA-232-D interface cable. See Figure 2-3.

1. Open the ferrite choke and place it around the DTE cable as close as possible to the connector attached to the modem.

2. Close the two halves around the cable and snap the ferrite choke shut, pressing down on the plastic latch to secure it.

3. Install a cable tie behind the ferrite choke to prevent it from sliding along the cable.

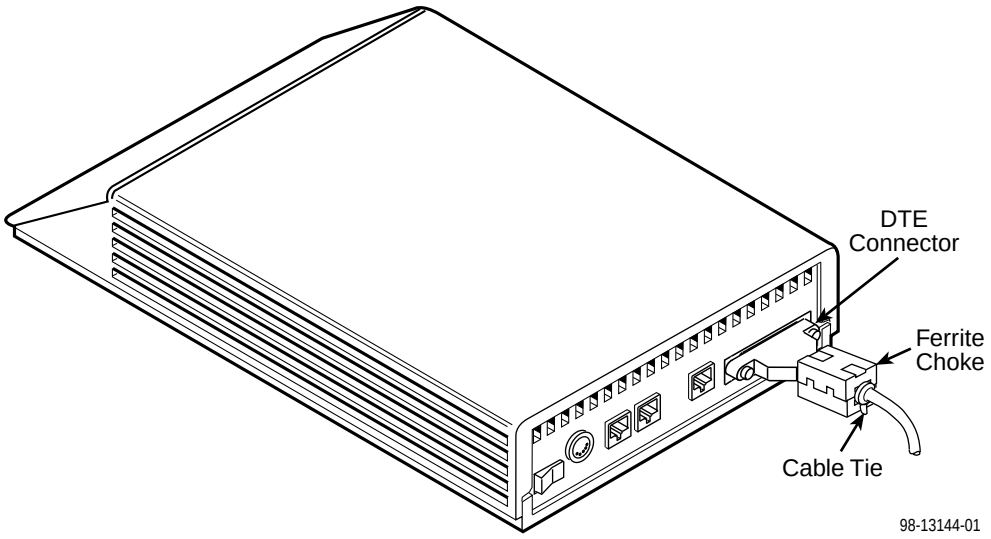

Figure 2-3. Model 3810 and Model 3820 Ferrite Choke Installation

AC Power Transformer Connection

The 90–110 volt power transformer is equipped with a 5-pin DIN connector for modem connection, and a grounded line cord for AC power outlet connection.

Use the following procedure to connect the standalone modem to an ac power outlet:

1. Make sure the modem's power switch is in the Off position.
2. Insert the power transformer's 5-pin DIN male connector into the modem's rear panel ac power receptacle (Figures 2-1 and 2-2).
3. Insert the line cord's wall plug into the appropriate grounded ac outlet.
4. Refer to the *Modem Power-Up* section in Chapter 2 for modem startup procedures.

Model 3811 Modem Installation

To install the Model 3811 modem (carrier card) into the COMSPHERE 3000 Series Carrier, follow the same installation procedures described in the *Model 3811 Modem Installation* section in Chapter 2. For correct power, DTE, dial, and leased-line cabling procedures, refer to the *COMSPHERE 3000 Series Carrier, Installation Manual*, Document No. 3000-A2-GA31.

Note that the Model 3811 supports the following features:

- Carrier assembly
  - — 3000-B1-601 – COMSPHERE 3000 Series Carrier with 100 volt power supply
- Network Interface Modules (NIMs)
  - — 3000-F1-003 – RJ21X NIM without the Make Busy and Service Line feature
  - — 3000-F1-010 – RJ21X NIM with the Make Busy feature
  - — 3000-F1-016 – RJ21X NIM with the Service Line feature
  - — 3000-F1-018 – RJ21X NIM with the Make Busy and Service Line features
- Cables
  - — 3600-F2-503 – 50-pin to eight 8-position keyed modular plugs used for leased-line networks
  - — 3600-F2-505 – 50-pin to eight 8-position keyed modular RJ45S plugs used with NIMs for dial-line networks

To ensure compliance with FCC Part 15 Regulations, a ferrite choke must be installed on the EIA-232-D and RS-366-A interface cables. See Figure 2-4.

1. Open the ferrite choke and place it around the DTE cable as closely as possible to the connector attached to the modem.

2. Close the two halves around the cable and snap the ferrite choke shut, pressing down on the plastic latch to secure it.

3. Install a cable tie behind the ferrite choke to prevent it from sliding along the cable.

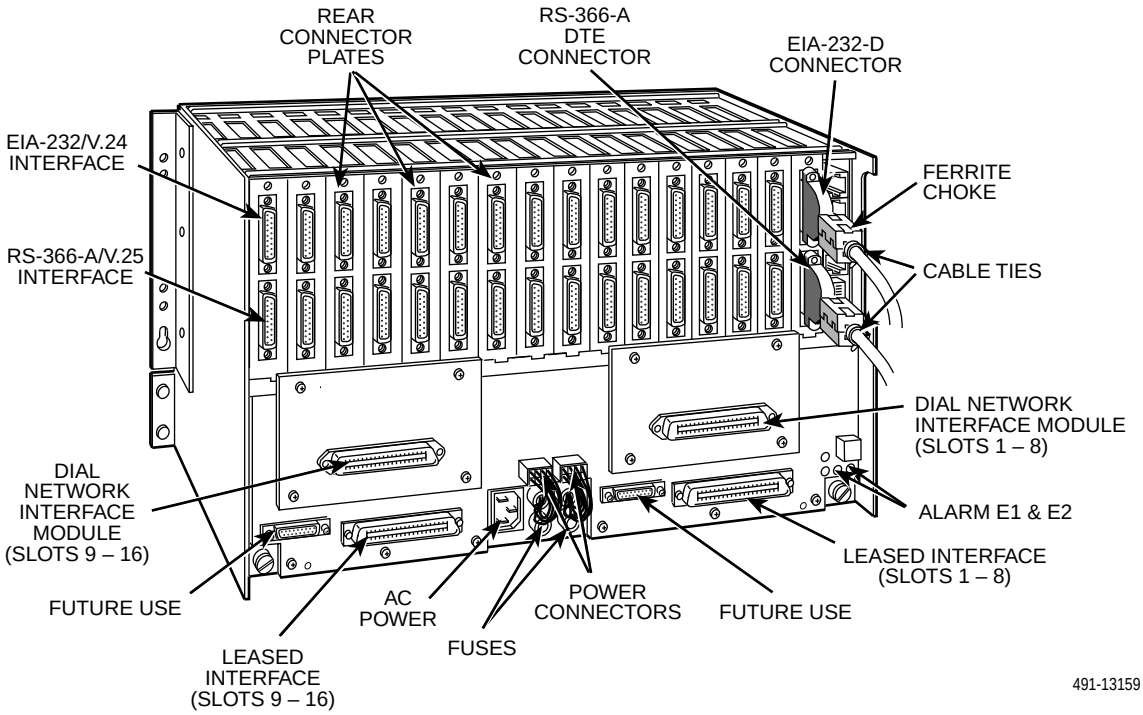

Figure 2-4. Model 3811 Ferrite Choke Installation

Restrictions and Configuration Options 3

Overview

This chapter lists restrictions and configuration options that are unique to the operation of 3800 modems installed in Japan. The information described in this chapter differs from what is listed in the *COMSPHERE 3800 Series Modems, Models 3810, 3811, and 3820, User's Guide*.

If a configuration option is not listed in this supplement, your modem's functionality and operation follow what is described in the *COMSPHERE 3800 Series Modems, Models 3810, 3811, and 3820, User's Guide*.

Restrictions

Due to JATE (Japan Approvals Institute for Telecommunications Equipment) regulations, only 3 attempts to dial a number are permitted in a 3-minute period. If a fourth attempt is made to dial the same number, the modem returns the ERROR return code. This restriction applies to a number dialed from the command line or from a directory. An occurrence of the restriction is canceled when a different number is dialed, or when 3 minutes have elapsed.

The fax feature is not available on modems installed in Japan.

Configuration Table

Table 3-1 describes configuration options that are different for 3800 Series modems installed in Japan or new with the firmware release of the modem accompanying this document.

Table 3-1
(1 of 3)
Configuration Options for Japan

Factory Defaults	
Factory Default Templates for Cellular	
If Enhanced Throughput Cellular (ETC) is installed, the AT command &F5 or the front panel selection Cellular (Mobile) sets the following configuration options:	
Option	AT Command Value
Maximum Frame Size	\A4
Error Control Mode	\N4
Auto-Answer Rings	S0=3
No Answer Timeout	S7=45
No Carrier Disconnect	S10=100
V.32bis Train	S43=1
V.32bis Autorate	S76=3
V.42 ARQ Window Size	S89=9
Cellular Enhancements	S91=1
If ETC is installed, the AT command &F6 or the front panel selection Cellular (PSTN) sets the following configuration options:	
Option	AT Command Value
Transmit Level	&I15
Error Control Mode	\N4
No Answer Timeout	S7=45
No Carrier Disconnect	S10=100
V.32bis Train	S43=1
V.42 ARQ Window Size	S89=9
Cellular Enhancements	S91=17

Table 3-1
(2 of 3)
Configuration Options for Japan

Line Dialer Configuration Options
Blind Dial Paus: 4sec **Nxt 4sec 2sec 6sec 8sec 10sec 20sec**
Blind Dial Pause. Determines how long the modem waits before dialing a telephone number when DialTone Detect is disabled. **NOTE:** The Blind Dial Pause configuration option only appears when the Dial Tone Detect configuration option is disabled. The factory default is 4sec. AT command is S-Register S6=*n,* where *n* is a value from 2 to 255 in 1-second increments.
NoAnswer Timout: 45sec **Nxt 45sec 30sec**
No Answer Abort Time-out. Determines the number of seconds an originating modem waits before abandoning a call attempt when no answer tone is received. **NOTE:** Although DCP selections are limited to 30 or 45 seconds, values from 1 through 45 can be set with the AT command. The factory default is 45sec. AT command for No Answer Timeout is S-Register S7=*n*, where *n* is a value from 1 to 45 in 1-second increments.
Dial Line Configuration Options
Dial TX Level: -15 dBm **Nxt –15 dBm –1 dBm –2 dBm –3 dBm –4 dBm –5 dBm –6 dBm –7 dBm –8 dBm –9 dBm –10 dBm –11 dBm –12 dBm –13 dBm –14 dBm**
Dial Transmit Level. Sets the power output level of the transmit signal over dial lines. This value is adjustable from –1 dBm to –15 dBm. The AT command for Dial TX Level is &I*n*, where *n* is: 1 = –1 dBm 9 = –9 dBm 2 = –2 dBm 10 = –10 dBm 3 = –3 dBm 11 = –11 dBm 4 = –4 dBm 12 = –12 dBm 5 = –5 dBm 13 = –13 dBm 6 = –6 dBm 14 = –14 dBm 7 = –7 dBm 15 = –15 dBm 8 = –8 dBm

Table 3-1
(3 of 3)
Configuration Options for Japan

Leased Line Configuration Options
Leased TX Level: –15 **Nxt 0 –1 –2 –3 –4 –5 –6 –7 –8 –9 –10 –11 –12 –13 –14 –15**
Leased Transmit Level. Selects the modem's transmit power level over leased lines. The transmit output level can be selected in 1 dBm decrements from 0 dBm to –15 dBm. The factory default is –15 dBm. AT command is S-register S45 = *n*, where *n* is a value from 0 to 15 corresponding from 0 dBm to –15 dBm.
2W SQ Retrain: Disable **Nxt Disable 1 2 3 4 5**
2-Wire Leased Line Signal Quality Retrain. Forces the modem to retrain if the SQ (Signal Quality) LED is on for more than the specified number of seconds (1–5). 2W SQ Retrain reduces the amount of bad data sent to the DTE when no error control is used, but greatly increases the likelihood of retrains on impaired lines, especially when Autorate is disabled. **NOTE:** This configuration option is available only if Leased Mode is 2WLL-Orig or 2WLL-Ans, and affects only V.32 and V.32bis modulations. The factory default is Disable. AT command for 2W SQ Retrain is S-register S81 = *n* where *n* is 0 for Disable or 1 to 5 for 1 to 5 seconds.